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LaPoma, Jennifer

From: Nickerson, Jay <Jay.Nickerson@dep.nj.gov>
Sent: Thursday, May 22, 2014 11:10 AM
To: LaPoma, Jennifer; Vaughn, Stephanie
Cc: Hayton, Anne; Pecchioli, Joel
Subject: LPRSA RM 10.9 Progress Report April 2014 - comments

Jennifer/Stephanie, The New Jersey Department of Environmental Protection (NJDEP) has reviewed the April 2014 Passaic River RM 10.9 No. 20 Progress Report. The NJDEP is not in agreement with item d, bullet 3 (bottom of page 3 of 5), regarding cap integrity monitoring, whereby CPG "believes that only physical monitoring is sufficient and required to monitor the effectiveness and integrity of the cap."

Be advised that, to date, a LTMP has not been provided to the regulatory agencies for review. The following comments are provided to the USEPA supporting the NJDEP's position regarding the necessity of an acceptably designed Long Term Monitoring Program (LTMP). A hardcopy of this email will be provided to the USEPA.

Comments:

In CPGs May 15, 2014 Progress Report, de maximus, inc. (CPG) refers to the Hudson River and Onondaga Lake projects to support their position regarding cap monitoring. It is a "leap" to state that because only long-term monitoring was deemed appropriate for these two projects, it should likewise be sufficient for the Passaic River RM 10.9 TCRA project. Physical conditions, contaminants of concern, and objectives (remedial and other) for these two projects differ from those in the Passaic River RM10.9 TCRA. For example:

(a) The Passaic River RM 10.9 TCRA is, in part, supposed to be a "pilot project" to provide additional data and information to support development and implementation of the remediation action for the remainder of the Lower Passaic River Restoration area. Monitoring both the physical integrity and chemical isolation functionality of the cap is essential to verifying its efficacy. This is critically important given the various "problems" experienced in completing cap placement activities, including a delay of many months over the winter between placement of the active cap component and placement of the geotextile and armor layers, and apparent problems with placement of the geotextile layers due to high river current speeds. In addition, since the final remedy for the LPRSA may not be implemented for a number of years, comprehensive monitoring of the Passaic River RM10.9 TCRA cap will provide valuable information that can be used to refine the capping requirements for the much larger Lower Passaic River Restoration area.

(b) Groundwater upwelling is a significant concern in the Passaic River RM10.9 TCRA project area, and was the basis for including an active cap component. Is groundwater upwelling a concern for the Hudson River and Onondaga Lake projects? If not, then these two projects have very little relevance to the monitoring needed to verify the integrity of the Passaic River RM 10.9 cap.

(c) While PCBs are the major concern in the Hudson River and [what COCs?] in Onodaga Lake, multiple contaminants are of concern in the Passaic River RM10.9 TCRA project (and not just dioxins/furans – if this were the case, given dioxins/furans very low solubility, and active cap component would not have been needed).

(d) In addition to reducing direct contact risks, the Passaic River RM10.9 TCRA had other objectives as mentioned in comment (a) above, as well as referenced in Section 1.2d), Removal Action Objectives, River Mile 10.9 Removal Action Final Design Report, Lower Passaic River Study Area" (July 31, 2013), as follows:

-Bullet #2 reads “Prevent potentially significant migration of contamination from the RM 10.9 Removal Area”; and

-Bullet #7 reads “Evaluate effectiveness of sediment capping methods on reducing bioavailability and migration of COPCs, including caps with carbon amendments in an active layer to mitigate the potential from contaminants to migrate upward through the sand cap.” Be advised that the active component of the cap was designed based on the results of the CAPSIM model. This model needs to be verified for use in the Passaic River if it is to be used for the larger LPRSA remediation project. One of the only ways to verify that the model works in the Passaic River is to monitor the RM10.9 TCRA project cap.

(e) The CPG cites the Hudson River project where Phase 2 chemical monitoring of the engineered caps is slated to occur beginning 10 years out and then every 10 years thereafter. However, there are significant differences between conditions and remedial goals between these two projects. The Hudson River Phase 2 remediation involves much more aggressive sediment excavations (i.e., deeper, with deliberate over-dredging) to achieve remedial goals within a single dredge pass if possible, with capping to contain dredge “residuals” in the immediate vicinity of the cut area. The remaining contamination, post-dredge, is not expected to be several orders of magnitude above sediment remedial goals, which is in stark contrast to the RM 10.9 situation, where multiple categories of toxic contaminants remaining at very high levels beneath a shallow cap. Therefore, for this aspect of the project, the Hudson River Project is not directly comparable.

(f) The CPG cites Onondaga Lake with long term monitoring of chemical and physical parameters to check cap integrity. Capping in a lake setting is quite different from the physical setting at RM 10.9 in the Passaic River. In addition, it is unknown if both the contaminant levels (type and concentration), cap design and potential groundwater upwelling through contaminated sediment and associated caps compare well between these two projects; both factors, among others, drive the need for site-specific chemical constituent monitoring.

(g) The CPG cites the Tierra Phase I removal action stating that the USEPA did not require any post remedial monitoring. For the Tierra Phase I removal action, the excavation was a minimum of 12 feet deep across the designated area, with the intention of removal of most, if not all, of the significant levels of contamination, which was subsequently backfilled to sediment bed surface. This is entirely different from RM 10.9, where significant “new surface” contaminant concentrations remain (i.e., PCB maximum of 28 ppm, average of 10 ppm; 2,3,7,8-TCDD maximum of 29,800 ppt, average of 9,478 ppt) immediately below a shallow (2 ft.) cap.

(h) The RM 10.9 TCRA was designed to quickly abate surface sediment contamination. For this shoal area at RM 10.9, shallow sediment removal followed by capping was selected over more aggressive sediment removal, the latter of which would have resulted in a more permanent and comprehensive remediation of this area. The selected remedy was viewed as an opportunity to “test” many aspects of contamination “containment” within this area of the river, paramount of which, includes cap integrity. Given the contaminant levels immediately below the engineered cap, from a NJDEP perspective, cap integrity evaluation always included chemical monitoring in addition to checking on physical stability of the cap. CPG should review the Department’s letter dated April 26, 2013, to Mr. Willard Potter, De maximus, Inc., from Suzanne Dietrick, Chief, Office of Dredging and Sediment Technology, Site Remediation Program, NJDEP, and referenced Attachment A, containing detailed conditions for approval. CPG met the requirements for design and implementation of both a project-specific Surface Water Quality Monitoring Program and a Perimeter Air Monitoring Program. However, despite repeated requests, an acceptably designed Long Term Monitoring Program has not been developed or submitted for review by the regulatory agencies.

References

Key documents which provide the justification for, and useful references on cap performance and remedial goal monitoring include the following:

http://israp.org/pdf/Navy_LTM_Guidance_FINAL_021110.pdf
http://www.epa.gov/superfund/health/conmedia/sediment/guidance.htm
http://www.epa.gov/glnpo/sediment/iscmain/five.html#Monitoring

If you have any questions, please contact me as provided below.

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